

ELEPHANT HUNTING IN EQUATORIAL AFRICA

THE
AMERICAN MUSEUM
JOURNAL

GENERAL LIBRARY
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FEB 14 1912



Volume XI

February, 1912

Number 2

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The American Museum Journal

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Subscription, One Dollar per year. Fifteen cents per copy

A subscription to the JOURNAL is included in the membership fees of all classes of members of the Museum

Subscriptions should be addressed to the AMERICAN MUSEUM JOURNAL, 30 Boylston St., Cambridge, Mass., or 77th St. and Central Park West, New York City

Entered as second-class matter January 12, 1907, at the Post-Office at Boston, Mass.
Act of Congress, July 16, 1894



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IN THE FORESTS OF UGANDA

Elephant hunting brings much that is fascinating. Never to be forgotten was that moment when, after hearing the scuffling of great feet among leaves, we came face to face with one of the great beasts in the dim recesses of the jungle. The photograph shows this young elephant, which was about the size of "Jumbo"; his small size and short tusks did not warrant the use of the rifle.

The American Museum Journal

VOL. XII

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ELEPHANT HUNTING IN EQUATORIAL AFRICA

With photographs by the Author

By Carl E. Akeley

ONE evening in Uganda when rather discouraged after a day of unsuccessful effort to locate elephants, we suddenly heard the squeal of an elephant far to the east. The squealing and trumpeting increased in frequency and distinctness until in an hour's time we realized that a large herd was drifting slowly in our direction. By eleven o'clock they had come very close, some within two hundred yards of camp, and on three sides of us. The crashing of trees and the squealing and trumpeting as the elephants fed, quarreling over choice morsels, resulted in a din such as we had never before heard from elephants.

Our men kept innumerable fires going for fear that the elephants might take a notion to raid the plantain grove in which we were camped, and at daylight I was off for the day's hunt. The herd had drifted down to the forest side, forty minutes from camp, in fact many of them had entered the forest. For a couple of miles we traveled through a scene of devastation such as a cyclone leaves in its wake: eight-foot grass trampled flat except for here and there an "island" that had been spared; half of the scattering trees twisted off and stripped of bark, and of all branches and leaves.

We approached within a few hundred yards of the forest, where the grass was undisturbed except for trails showing how the elephants at daybreak had trekked through in small bands, single file. When about to cross a little wooded gulley, we thought it wise to stop and look over the situation. From the top of a mass of rocks, we discovered a cow feeding only twenty yards away and others all about in the high grass between us and the timber. There was clear passage to a rocky elevation one hundred yards to the left, for which we made, and while standing there, seventy-five feet above the level, I received an impression of Africa that must remain with me to the last.

There was not a breath of wind, and the forest, glistening in the morning sunlight, stretched away for miles to the east and to the west and up the slope to the north. Here and there in the high grass that intervened between our perch and the forest edge, three hundred yards away, were scattered elephants singly and in groups feeding and loafing along, to be swallowed by the dark shadows of the dense forest side. From the gulley which I had started to cross a little time before, there stalked twenty-five



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When approaching this cow from the rear, some slight noise was made, at which she wheeled and charged, paying the death penalty in consequence. The next cut shows the offspring of this cow, a youngster three or four years old and quite able to take care of himself

chimpanzees yelled and shouted at one another or everything in general, baboons barked, and great hornbills did their best to drown all other noises with their discordant rasping chatter. Suddenly, a cow elephant at the edge of the forest just in front of us uttered her peculiar shrill scream of warning. Not only the elephants but all the other forest folk paid heed

or thirty of the great beasts, their bodies shining with a fresh coating of mud and water from the pool where they had drunk and bathed. As is usual with big herds, they had broken up into small bands on entering the forest, and now as the last of them disappeared into the cover of the trees, a fuller appreciation of the surroundings suddenly dawned upon me. From a mile or more in either direction there came a reverberating roar and crash as the great hordes of monsters ploughed their way through the tangles of vegetation, smashing trees as they quarreled, played and fed all regardless of forestry regulations.

Where the little stream at the bottom of the gulley entered the forest, troops of black and white Colobus monkeys were racing about the trees, swearing at the elephants. From the tree tops deeper in the forest two or three troops of



TYPICAL ELEPHANT COUNTRY

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This young elephant, whose mother had just charged the members of the expedition, remained some time deciding whether or no! to take the chance of following. Thus he gave an opportunity for some good photographs

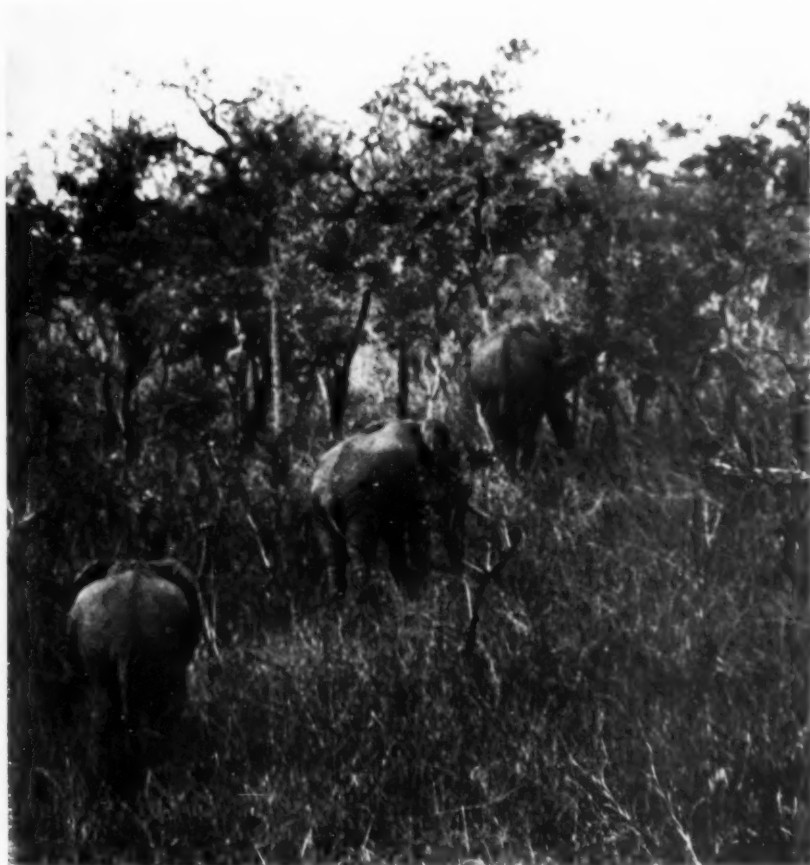


TREKKING THROUGH ELEPHANT COUNTRY

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Elephant trails are easy to follow through grass, which shows plainly where the animals trekked in single file

and instantly were silent; a moment before the noise had been appalling, the silence now was even more so. Then there came a gentle rustling sound like that of leaves stirred by a breeze, increasing in volume until it sounded like a mighty windstorm in the trees. I looked about to see whence it came. With my glasses I scoured the forest far and near, but not a visible leaf seemed to stir. Then I realized that the sound was made by elephants



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Part of a herd of seven bulls that we tracked all day only to find that there were no large-sized tuskers among them

on the move, hastening away from danger — the scuffling of their feet among the dry leaves on the ground and the scraping of their sides against the equally dry leaves of the bushes. In a way this was even more impressive than the great din or the deathlike silence preceding.

The old cow had caught a whiff of air tainted by man and all obeyed

her warning. In a few moments the rustling subsided, the monkeys and birds returned to their normal state. The elephants had evidently settled down without going far; but only at rare intervals during the rest of the day did we hear the squeal of a chastised youngster or the breaking of a tree.

With my gun bearers I went down into the forest. Trails crisscrossed in all directions so that it was impossible to follow a given trail any distance. A band of a dozen or so got our wind and passed us in confusion at close range, but the bush was so dense that I had but small glimpses of them. A mile into the forest brought us to an irregular clearing, two hundred by five hundred yards in extent, almost bisected by a "peninsula" of forest. At the base of this peninsula I nearly ran against a young bull, one of a considerable number as I soon discovered. The whole herd began working toward the point of the peninsula and I ran along the outer edge to head them off. Just as the leader emerged from the point, they saw or winded us — shifty, uncertain breezes had sprung up — and they turned back. I ran into the timber to try for a better view of them. I soon found myself facing a cow who, solicitous for her very young calf, had wheeled about, all attention and menacing. Fortunately at the moment we were partially screened behind a clump of small trees, and as we remained motionless the cow's fears were soon allayed and turning, she gave the calf a boost with her trunk and followed the herd, which was moving off toward the clearing on the other side.

Hurrying out and around the point, I found the herd in the clearing, rounded up in close formation, conscious of the presence of an unseen enemy. There were about twenty-five elephants, mostly cows, and just as I was on the point of backing off to a safer distance, thinking there were no big bulls in the lot, a fine pair of tusks appeared at the near side. A clump of bushes offered cover for a near approach and I went in quickly to within twenty yards of him, and as his front leg was thrust forward offering a good opportunity for a heart shot, I fired both barrels of the double rifle in quick succession.

All was commotion as I seized my second rifle, and seeing that there was no direct charge, retreated some fifty yards to the top of an ant hill from which I could see what was going on. I then witnessed a scene such as I had heard described and which I had been keen to verify. A number of cows were clustered about the bull, for he had fallen thirty yards from where he was shot, and with their tusks and trunks were doing their best to get him upon his feet; the remainder of the cows were doing patrol duty, rushing about in an increasing circle, searching for the source of trouble. That meant me, so I retired to a safe distance and waited for the atmosphere to clear. This bull stood eleven feet, four inches high at the shoulders, and the tusks weighed ninety-five and one hundred and ten pounds respectively, while the circumference of the front foot around the sole was sixty-seven and one-half inches, the largest recorded, I believe.



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Bulls in a make-believe fight. When this picture was taken there were elephants on three sides of the photographer, which explains the inaccurate focusing of the camera



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A number of cows did their best with trunks and tusks to get this fallen companion to his feet. He was one of a herd of 700 elephants; height at shoulders 11 feet, 4 inches; circumference of front foot (sole) 67½ inches, the largest recorded; weight of right tusk (showing in picture) 110 pounds. The oldest bulls are those which have long been protected in large herds of aggressive cows and young animals



THE PLATEAU TO THE EAST OF MOUNT ELGON

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Four herds are in sight, consisting of cows and young animals of inferior grade. Mr. Akeley inspected more than one hundred elephants in the Mount Elgon district without discovering a single large specimen, all the valuable elephants having been killed off by ivory hunters; the herds remaining, having been unmolested for some years, are unusually vicious in temper.

On the Elgon Plateau Mr. Akeley joined Colonel Roosevelt and his party in a short but successful elephant hunt



A SMALL HERD WITH ONE YOUNG BULL FACING READY TO CHARGE

"I ran around a clump of bush to head off this band of young bulls, and found myself closer to them than I expected. One of them saw me and I was expecting trouble when the camera should click, but they bolted and I got a second picture as they turned."

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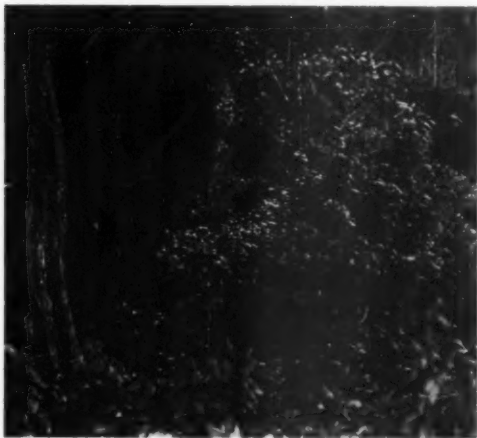
ELEPHANT COWS AND CALVES RESTING IN THE FOREST

They are quietly enjoying the midday siesta. A gust of wind blowing toward them from our direction would have been certain to result in a charge

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The following day I went into the forest again and soon came up with a herd, but in cover so dense that an inspection could not be made. We worked with them for hours and finally succeeded in driving them out into the open, but unfortunately the grass was high and I had not succeeded in gaining a point of vantage, when with angry grunts they doubled back to the forest. As I turned to follow, my attention was called to a commotion in the bush at the edge of the forest some four hundred yards to the left. Another herd was coming out into the grasslands and from the top of an ant hill I saw them distinctly as they passed over a rise fifty yards away. There were eleven cows. I waited a few moments thinking that as often happens, a bull might follow in their wake. The cows had passed on to a distance of three or four hundred yards and I was about to leave the ant hill and return to camp, when from the direction of the cows there came a low, ominous rumble like distant thunder. It was not very unlike the angry rumbling sounds we had so frequently heard when with elephants, but it was plain talk and meant trouble. A hasty glance around convinced us that there was but one thing to do, to stand and meet the charge from the elevation where we were and from which we could see. If we tried to escape to one side or to the forest, we could not see them over the high grass before they were upon us. The rumbling was repeated two or three times, increasing in volume, and was then followed by the wild shriek of one angry cow and immediately taken up by ten others as they charged toward us. They came halfway and stopped for a moment. They had lost the wind, but immediately caught it again and roaring and screaming with redoubled energy, came into view over a slight rise. It was a disconcerting spectacle. Their great ears at full spread, trunks thrashing wildly, a roaring, screaming mass, forty tons of frantic female elephant vengeance. I remember that I felt homesick.

Were they to continue in a straight course they would pass at forty yards; then a dash on our part to one side and we could lose them and be safe. When they were nearly opposite us however, they either saw or winded us afresh and wheeled straight on, with a burst of shrieks. A shot from the big cordite



Copyright by Carl E. Akeley

A forest bed where a young elephant was born and cared for during the first week or ten days of its life. This was found by the expedition while traveling by compass on Mount Kenia, well away from all trails

rifle stopped the leader, but encouraged by the others she came on, only to be knocked down by the second shot. The others crowded about her, sniffed and—bolted. The old cow slowly regained her feet and staggered away while we in deep gratitude returned to camp.

It was in August, 1909, that we left New York commissioned by the American Museum of Natural History to secure specimens for a group of African elephants. We began serious work on the Uasin Gishu Plateau knowing that there we should be able to secure the smaller specimens, cow and young elephants, and we had reason to hope that a large bull might be found on the plateau or in the forests of Mount Elgon, for in former days great numbers had inhabited the rich feeding grounds of the Elgon forest as evidenced by the old pits (traps), scarred trees and decaying bones. We inspected more than a hundred elephants however, without finding a trace of a single large specimen. Soon after reaching the plateau we met Colonel Roosevelt and party, with whom we made a short but successful elephant hunt, the result of which was two cows shot by Colonel Roosevelt and one calf shot by Kermit Roosevelt. Later a young bull shot by John T. McCutcheon of our party was preserved.

We journeyed to the summit of Mount Elgon from the south and down to the east without finding the least recent trace of elephants until we had returned to the bush country of the plateau. Then we proceeded to Uganda, secured porters at Entebbe, marched along the Hoima Road to the Kafu River, down the Kafu to where the old Masinde-Kampala Road crosses it, then to Masinde, seeing no elephants during the two weeks' journey. We then devoted a month to hunting in the region of the Victoria Nile between Masinde and Foweira. This is a region of big elephants where many splendid tuskers have been taken in the past, but really good ones are now very rare. On this occasion we shot two bulls enormous in size but with tusks weighing only from seventy-five to eighty pounds each.

About the middle of April as I was suffering from physical disabilities that made the preparation of an elephant skin impossible, we decided to

return to the Uasin Gishu Plateau where in the more healthful highlands I might hope for recovery. Though the rains were on at this time we found no elephants on the plateau, so we devoted twenty days to lion-hunting with a party of Nandi warriors for the purpose of making motion picture records of the spe-



A few years ago great herds were to be found in the forests of Mount Elgon but they have either been killed or have deserted because so harried by ivory hunters.



An open waste in the bamboo jungles of Mount Kenia. The cows and calves spend much of their time in such jungles, feeding on the succulent roots of young bamboo. Many photograph studies were made by the expedition to help in the construction of a natural habitat for the elephant group to be set up at the American Museum

tacular sport of lion-spearing. About the middle of May we trekked across country to Mount Kenia for the purpose of making studies for the setting of the elephant group.

The forests of the southern slopes of Mount Kenia are inhabited by forest elephants, who seldom if ever leave them except to make short night excursions into the gardens of the Wakikuyu natives. Wishing to learn something definite in regard to the limits of their range on the mountain, we made the ascent from the south through the timber and bamboo belts on to the snow fields at the base of the pinnacle. We found that the elephants regularly work up to timber line (12,000 feet) and we found comparatively fresh tracks in the sphagnum marshes at 14,500 or more feet.

It was while on this excursion we found the "maternity bed" of an elephant. Under the protection of a great mass of aerial roots and the foliage of a great tree on the point of a densely forested ridge, accessible

from only one direction, there was a deeply trodden bed of dry earth where the baby elephant had been born and had spent the first week or ten days of its life, while the mother watched over it or fed on the abundant vegetation near at hand. Later we found a second bed precisely similar as to situation. These beds were well off the lines of elephant travel.

Upon returning from the summit of Kenia to the native gardens at the edge of the forest, I went back again to the bamboos to make photographic studies for the background and gather materials for accessories for the group. While thus engaged I met a bull elephant which left me much the worse for the experience and necessitated my return to the base camp on a stretcher. This event postponed work for several months and it was not until January, 1911, that we resumed active work in the field. From then until the first of June we worked in Unyoro from the Victoria Nile on the east and north to Lake Albert on the west northward of Masinde.

This district has now been closed because of sleeping sickness and thus becomes an elephant reserve. During the time we were there we saw much of the results of this awful disease, whole villages in which not a living being was to be found, those who had escaped alive having abandoned all household utensils and stored food together with the huts and gardens to the mercy of the elephants, who had come in great herds, destroyed the plantain groves and bark cloth trees, completing the work of devastation.

The elephants do not always, by any means, wait for the natives to go. We saw many cases where they had raided a garden at night and completely destroyed all crops and in some instances when angered by the natives' attempts to drive them away, had destroyed the huts also. The amount of damage that a herd of five hundred elephants can do to forests and native cultivation is enormous. In following a herd of two hundred and fifty we were led through a garden where the night previous elephants had destroyed a large plantain grove and broken down fifty or more bark cloth trees averaging a foot in diameter. This was a herd from which all good bulls had been killed and the remainder, enjoying immunity from sportsmen and ivory hunters, had become contemptuous of man. When we approached the herd and they became aware of our presence, they surged down upon us, keeping us at a distance, and not until I climbed a tree in advance of them did I get a chance to look them over as they approached and passed. The average value of ivory in this herd would not have exceeded twenty dollars per head, not enough to cover the damage done by them in one year.

Coming south from the neighborhood of Murchison Falls we were resting at the summit of the pass over Poduro Hills when we detected a herd of about one hundred elephants at rest some two miles to the south. As we watched them they began moving in our direction and ultimately reached the base of the hills, where we met them. In the meantime a second herd of more than a hundred appeared, traveling rapidly to the north passing within



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MOUNT KENIA, AN OLD DENUDED VOLCANO OF BRITISH EAST AFRICA

Photograph taken from a position southwest of the mountain in the village of Chief Gwandero, a Kikuyu



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Elbert, Mount Kenia's highest pinnacle (17,007 feet) viewed from Lenana (16,300 feet), the snow comes above Lewis glacier



THE SUMMIT OF MOUNT KENIA

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The glaciers are Tyndall at the left, Darwin, the small one in the center, and Lewis which is largest at the right [see cut on opposite page]. The pinnacles are Batian, the highest, and Nelion, second in size.

The ascent of Kenia was made by the expedition to know the exact limit of the range of the elephant. The animals were found up to timber line (12,000 feet), and comparatively recent trails were discovered in the sphagnum marshes at 14,500 feet. The journey led from the south through the timber and bamboo belts on to the snow fields at the base of the pinnacles.



The monkey, named "J. T. Junior," was captured on the Tana River in the first month of the expedition's travels and remained a member of the party throughout the two years — often the most helpful member in the good cheer he furnished. In the climb of Mount Kenia he was stricken with mountain sickness at 15,000 feet elevation and had to be sent back

easy inspection range of our outlook. During the time we were engaged in watching these elephants, the middle ground was occupied by two herds of buffaloes and as we went down to look the elephants over at the foot of the hills, we jumped the third herd of buffaloes in the bamboos. There were over three hundred in all.

It is generally understood that large bull elephants are more frequently to be found apart from the herds, but our experience does not bear this out. Three bulls that we have shot having tusks each weighing one hundred pounds or over, have been herd bulls. In Uganda we often found bulls unaccompanied by cows, singly and in small herds numbering up to fifteen individuals, but it was not among these that we found the largest tusks. We have found the large old bulls enjoying the society and protection of large herds of cows and young animals.

One splendid old bull well-known in Uganda, who has been seen by many hunters, is so well protected by a large herd of most aggressive cows, who charge at the slightest intimation of danger, that he still survives. These



In this garden during the night previous, elephants had destroyed a large plantain grove and broken down fifty or more bark cloth trees averaging a foot in diameter. Elephants come in herds to villages deserted because of sleeping sickness. The damage is usually accomplished by herds containing no large ivory and which consequently have been unmolested by hunters until they are contemptuous of man



Copyright by Carl E. Akeley

This was one of a herd of eight or ten bulls. He charged ferociously three times and nearly caught one of the boys of the expedition. He was a heavy, thickset elephant, with short tusks of eighty pounds each. His ears were extremely large, six feet, five inches in depth



Copyright by Carl E. Akeley

A freshly dug elephant pit. The top will be covered with cross sticks and concealed by earth loosely thrown over the sticks. The unwary elephant crashes through this cover, its great feet are wedged in at the bottom of the pit and it suffers a lingering death. An elephant pit is usually 9 feet deep, is large at the top (3 to 4 feet wide and 10 to 12 feet long) but tapers to a width of only 6 to 12 inches at the bottom. Pits are often made in groups of three, one in the trail and one a few yards at either side.

old bulls are very rare, for when a bull has developed tusks of fifty pounds, which is at quite an early age, perhaps twenty-five years, he becomes the target of every hunter, native or white, who sets eyes upon him; thus it is only the more crafty or timid individuals, that seeking the protection of large herds or clinging to the more inaccessible regions such as dense forests, manage to survive to a ripe old age and develop a full growth of ivory.

The best bull at present in our collection for the group is a young adult standing eleven feet, three inches at the shoulders with tusks of one hundred and one hundred and two pounds respectively. These are young ivory and there can be no doubt that were this elephant to have lived fifty years longer, they would have attained a weight of two hundred pounds. Such tusks

are not abnormal, they are simply the tusks of a good healthy bull who has been intelligent and lucky enough to keep his life until his ivory was full-grown.

It would seem worth while that the world's permanent record of elephant life should contain a specimen that illustrates the fullest development of the African species, the finest living representative of this race of animals. Such an elephant can be secured now, but it will soon be everlastingly too late, for the remaining monster specimens will be killed for their ivory.



Copyright by Carl E. Akeley

An elephant pit completed but a few weeks, yet effectively concealed even to the observing eye by a new growth of vegetation. The pit is a hidden menace to the hunter as well as to elephants. It is sometimes furnished at the bottom with sharp-pointed stakes but fortunately this is not always true so that a man may fall into one with no more serious result than a good shaking up

INDIAN ROCK-SHELTERS

By Max Schrabisch

THE North American Indian, after he had long ceased to be a cave-dweller and had indeed acquired considerable skill in building tipis, wigwams and huts, was by no means averse to spending a week or two in the protection of some natural rock-shelter. It is only within very recent years that such aboriginal rock-houses in the East have been systematically investigated, although in the western states they have long attracted the attention of archaeologists. It is needless to say that these Indian rock dwellings — twenty-five of which I have explored since 1901 in northern New Jersey and southern New York — can occur only in mountainous districts. Here the redskin found natural clefts in the rocks, shelters under ledges or holes under large boulders and piled up masses of rock. The largest rock-shelter that I have discovered, known as Horse-stable Rock, lies two miles east of Tuxedo Park. It is at the base of a cliff, the roof of which projects from fifteen to twenty feet at an average height of eight feet above the floor, and it has a length of sixty feet. The smallest with height six feet, length six feet and projection of roof five feet, is situated in Passaic County, one mile south of Franklin Lake.

There is however many a fine rock-shelter, perfect in configuration and affording protection from boreal blasts, which has never been inhabited by the Indian, if we are to judge by the total absence of all traces of occupation. On the other hand, many apparently inferior shelters have been in great demand. The reasons for this are twofold: In the first place, a shelter to be desirable had to have a water supply in the immediate vicinity, such as afforded by brook, spring or swamp; and again, it appears that the redman preferred shelters with a more or less southern exposure, where the warmth of the sun's rays could be felt the greater part of the day. Rock-houses with water close by have apparently been avoided, probably for no other reason than that they opened northward, an apt illustration of the phenomenon of heliotropism observed throughout animate nature.

Inasmuch as our Indians were gregarious like ourselves, living together in their villages on the plains and in the valleys, it is highly probable that they used these rock-houses only as temporary stopping places to which they could repair for the sake of convenience, to feast, and to rest from the fatigues of the hunt. Besides, many of these rocks are in the wildest and most inaccessible sections of country, far away from the well-beaten trail. This being the case, it is quite certain that only the able-bodied huntsman would camp there, squaws and papoose staying behind in the settlements. The difficulties attending a journey through the trackless wilderness account also for the fact that no pottery was found in the rock-shelters which were hardest to reach, while those of easy access invariably contained pieces of



Digging for Indian pottery and weapons. This rock-shelter of Fairfield County, Connecticut, illustrates one of the most inferior of Indian shelters discovered, formed merely by an overhanging rocky ledge but in favorable position at the junction of two streams. The Indian used rock dwellings as temporary habitations, choosing the ones which combine southern exposure with a near supply of water

broken pottery, either on the ground or a little below the surface. Still it is quite possible that some of these shelters, especially those which were favorably situated, may have been occupied by whole families for months at a time, and this particularly during the winter season.

Wherever man dwells he leaves traces as evidence of his whilom presence. If scrutinized, these mute witnesses of days gone by furnish much information of archaeological import. They tell us something about the mode of living and the degree of skill attained in fashioning tools. Each rock-shelter that I have investigated has presented features of its own. The arrow point has been met with in nearly all of them, a notable exception being an Indian cave near Paterson, N. J., where nothing was found but flint blades and bones of many species of animals. Scrapers and chips are of common occurrence, a fact showing plainly that the ancient occupants of these rocks devoted much of the time spent there to replenishing their stock of weapons. As already stated, pieces of pottery are generally found only under those rocks which are easy to reach. Again, some shelters are remarkable on account of the profusion of bones scattered throughout the soil, with also many indications of ancient fires — fireplaces, heat-cracked pebbles and smoke-stained rocks. The bones belong predominantly to deer but also to many kinds of animals hunted by the redman, bears, opossums, rabbits, woodchucks, muskrats and wild turkeys, some now being



An Indian rock house in Westchester County, New York. This has a cavelike form. Large at the entrance (15 feet wide by 12 feet high), it grows gradually smaller until it makes a sharp turn 25 feet from the entrance into a room 6 feet wide and 3 feet high. Examination of these shelters to-day reveals pottery, arrow heads and other weapons, and bones of many animals used for food. Two Indian fireplaces were found in this shelter

extinct in the given districts. It is evident that the profusion of bones in any one place points to the fact that here the hunter was in the habit of feasting on the spoils of the chase. The bones show that they were cracked for the marrow as was usual, and many show traces of having been in contact with the fire. It does seem strange that not a single tomahawk or hatchet has been found in any of the twenty-five rock houses thus far explored. On the other hand, three comparatively rare artifacts — namely, a gorget perforated at both ends and two pitted hand hammers used for cracking nuts were obtained in three different shelters. Most of the prehistoric objects are found buried in the subsoil covering the floor of the shelter and they often occur all the way down to a depth of three feet.

To him whose mind is of an archaeological turn, the exploration of an Indian rock-shelter is an undertaking of the most fascinating kind. To such a one these places are invested with an irresistible charm, for here in the well-defined space underneath the rock he fancies to come nearer to the redman, to enter into greater intimacy with his interests and sympathy with his life. In contrast with field work which necessitates the search of ancient village sites, of ploughed fields along the banks of lakes, rivers and brooks, here everything is in one spot, narrow and circumscribed. Often the investigator wishes however that the rocks could speak and tell the happenings which once took place under their hospitable roof.

A STORY OF DECORATIVE ART

By Clark Wissler

AMONG the exhibit for the Indians of the Plains may be seen a few of those long, flowing buckskin dresses with beaded yokes so characteristic of their time, and in many yoke patterns can be seen a small *U*-shaped figure. Some old Teton-Sioux women once told me that it had been handed down to them that this figure symbolizes a turtle's head as he emerges from the lake represented by the beaded body of the yoke. In that fascinating jumble of myth, philosophy and religion from which these people derive the sanctions for their acts, the turtle stands for concepts intimately associated with woman and her ways, and hence it is fitting that the sign of the turtle should be upon the dress. The resemblance is apparent and it is natural to assume that this design was devised expressly to represent the turtle, since there is both poetry and art in the decoration of these old dresses.

Yet while we are convinced that these wrinkled old matrons of the Sioux told us what had indeed been handed down to them by their mothers, we hesitate to accept this as indicating the true origin of the design, for upon the garments of other tribes, even those speaking other stock languages, we find similar figures. The women of the Assiniboin, the Cree, the Gros Ventre, the Mandan, the Blackfoot, the Cheyenne, and others used variations of this figure on their dresses, for even the Indian belle had a weakness for the styles of foreign tribes. The simple fact that the style is so distributed does not necessarily weaken the assumption that it originated among the Sioux since from them it may well have been borrowed, while the fact that in so far as we know, not one of these other tribes has the least suspicion that the *U*-like figure represents a turtle or anything else, gives some color to its assumed Siouan origin. When however the dresses of the Blackfoot and some other tribes are examined, we note that in preparing the deer or elk hide for a dress the tanner is careful not to remove the hair from the tail. We note further that these dresses are fashioned by joining the tail ends of two elk or deer skins by a yoke or neck piece, the tail tuft by its position falling just below the center of the yoke. When the beading is laid on, the patterns are carried around the tail tuft with a sharp *U*-like turn. This is well shown on the fine old Blackfoot dress in the Audubon collection.

In some dresses the tail tuft is not as originally attached but sewed in place, making it clear that the conventions of style require the small tuft of hair on that part of the garment. When we look again at certain Sioux dresses, especially the one on the tall figure standing in one of the Museum cases, the beaded design bears even stronger resemblance to a deer tail than to a turtle. The tuft of hair is wanting, but within the beaded *U*



is a beaded design not unlike a deer's tail. Thus, it seems more likely that the simple deer's tail had its place on the dress of these Indian women before the yokes were beaded or quilled and that all for a time retained it, carrying the beaded design around its base. This in its turn became so fixed that though some tribes gave up the tail, they still kept its niche.

Unfortunately neither theory can be proved. Yet there are so many similar relations in the art of lowly peoples, that we incline to the assumption that the design is a deer's tail and not a turtle. On many objects even among our collections from the Plains may be seen a variety of identical designs symbolizing one thing to one tribe, a different thing to another, and nothing whatever to still others. Like all of us, the Indian has ideas and feelings to express, and seizes upon such symbols as come to his hand, reading into nature and art what is in his own mind.

So in this story we have one oft-repeated in decorative art: the adaptation of color and form to the contour of the decorated surface, the wide distribution of the motive because of its peculiar merit, and at last the touch of a refined personality who sees in it the symbol of some mighty thought. That the reverse order of procedure is the usual one is a theory often read in books and no doubt true in some instances, but absolute proof in either case is lacking.



A NAHANT TIDE-POOL THAT THE MUSEUM PLANS TO REPRODUCE

This pool will be copied exactly --- from the brilliantly colored animals and seaweeds of the water to the barnacle-covered rocks that arch above. Thus will be given permanence to one of the most instructive of biological associations in marine life.

ROCK TIDE-POOLS OF NAHANT

By Roy W. Miner

NAHANT on the north shore of Massachusetts is a region of wonderful rock tide-pools. The eastern face of the Nahant peninsula is formed by a cliff-wall of slate, granite and igneous rock occasionally rising to a height of sixty feet above the ocean. A certain pool at the foot of these cliffs, is spanned by a natural flying buttress of barnacle-covered and seaweed-draped rock which seemingly braces the precipice above. At low tide, in the water overshadowed by the arch, a marvelous profusion of animal and plant life is disclosed to view. Amid masses of "Irish moss," its finely cut lobes brilliant with purple lustre, rise the conical chimneys of gray-green sponges, while clustering groups of sea anemones, orange, brown or white, slowly unfold their petal-like tentacles. Starfishes of various sizes and contrasting colors — brilliant crimson, orange, purple and yellow — are seen everywhere on the pebble-strewn bottom or crawling slowly over ledges dotted with pink coralline and feathered with ruby-centered hydroids. Here and there is the green of sea lettuce beneath which lurk rockcrabs, while brown kelp reaches its great fingers toward the surface.

This particular pool has been selected for reproduction in the Museum and was carefully studied during the past summer by the writer, accompanied by Messrs. Matausch, Shimotori and Kirschner of the Museum staff. To transport this fairy cavern and enclose it bodily within museum walls seems a presumptuous undertaking, yet it is hoped that within the coming year an approximately faithful semblance of its beauties may form one of the new series of groups now under construction for the Darwin Hall.

AN EXPEDITION TO THE BLACK MOUNTAINS

By William Beutenmüller

THE Black Mountains being the loftiest of the Appalachians represent a region in which the remains of pre-glacial life can be studied to the best advantage. The insect life of the great Appalachian Mountain System is the most alpine of the southern Alleghenian fauna and therefore most typical of that fauna which skirted the great ice pack of the glacial epochs. The species of this fauna occupied a large part of the area of eastern North America during glacial times, when most of them became extinct. Therefore the species of the Appalachian System are a remnant of a fauna, at one time very extensive. Their present relationships are to a certain extent with the modified forms of lower altitudes, but to a far greater extent with the boreal forms found in more northern latitudes.



Two waterfalls among the tree ferns and other dense vegetation of the Roseau Gorge, Dominica



Valley of the boiling lake, Dominica, an ancient crater with many hot streams and pools

It is well known that from a faunal standpoint the southeastern United States (exclusive of Florida) is very remarkable. The fauna is not only rich in individuals and species, but also in endemic forms, that is species not to be found anywhere else. Some of these are indigenous while others are evidently fragments of an ancient and formerly widespread fauna.

The fauna of the South Appalachian System is very characteristic and the general relationship points both biologically and geographically to that of the northeastern United States and Canada.

From June to October an expedition from the Museum was engaged in field studies in the Black Mountains. The expedition was made possible by the generosity of Mr. Samuel V. Hoffman and the object was to collect butterflies and moths especially, and to obtain additional scientific data relating to the larger problems of ecology and distribution. Some four thousand specimens were collected, among which were many rare species not heretofore known from this region.

IN DOMINICA AND OTHER LESSER ANTILLES

By Henry E. Crampton

THE Lesser Antilles comprise a region interesting for biological study inasmuch as it provides the stepping-stones by which North America was in part repopulated from South America at the close of the Ice Age. The invertebrate faunas of this region were studied by three members of the invertebrate zoölogy staff in the summer of 1911.

On reaching St. Thomas khakis and leggings were donned, knapsacks and camera shouldered, and a hurried dash for specimens made into the interior, an action repeated at St. Croix, Antigua, Guadeloupe, Martinique and St. Lucia, much to the amusement of the ship's officers and to the wonderment of the inhabitants. More than two weeks, indeed more than three weeks in the case of Mr. R. W. Miner, assistant curator, were devoted to the study of Dominica, which is a magnificent field for biological explorations as well as the most beautiful of all the smaller islands. The work took the explorers from the low levels of the coast up through the lime and cocoa plantations of the narrow valleys into the dense jungle of the higher areas which are surmounted by sharp peaks rising to a height of nearly five thousand feet.

Most novel scenes confronted them on the visit to the volcanic crater whose present floor is seamed with steaming torrents, dotted with hot springs and in part occupied by a large boiling lake. So many different kinds of biological conditions have to be met by the species inhabiting this island that the thousands of insects, myriapods, spiders and other forms collected are exceptionally valuable for the study of the great laws of distribution and organic evolution.

COLLECTING IN JAMAICA

DURING the past year Mr. John A. Grossbeck and Mr. R. P. Dow, a member of the New York Entomological Society, have made large insect collections on the island of Jamaica for the American Museum. Considerable work was done at Cinchona, where is located the tropical botanical station of the New York Botanical Gardens. The town lies in the Blue Mountains about twelve miles from the coast at an elevation of 6000 feet. A luxuriant tree-fern forest was visited on the top of one of the highest peaks. The species secured from the various environments in these mountains are valuable for comparison with forms collected on lower levels of the island.

Montego Bay also furnished good collecting, with a series of cave species. For comparative study with these species at sea level, Catadupa, twenty miles inland and 3000 feet high, was also explored. More than three thousand entomological specimens representing approximately five hundred species, and about one thousand other invertebrates were secured altogether. Careful ecological data with a series of photographs illustrative of different environments give unusual value to these Jamaica collections.



Termites, or white ants, travel in covered galleries which they construct along every branch of the tree

The termite nest is made of wood-pulp and placed usually in trees, although sometimes attached to fence posts or stone walls

AN AFRICAN TRAVELER'S NOTE

THE Rev. W. S. Rainsford, who returned sometime since from an extended trip through British East Africa, has presented to the Museum a small collection of implements of war and the chase used by the Cherangang N'dorobo. In this collection are darts for killing the elephant, a quiver with iron-pointed, poisoned arrows for general hunting, and one arrow with point of wood to which Dr. Rainsford has attached a label with this legend, "For shooting men." He has also presented the Museum with a rare species of monkey.

Dr. Rainsford gives the following note regarding his gift:

"The poison smeared on the elephant darts was given me by the Cherangang N'dorobo. This small tribe has lived among the heavily wooded fastnesses of a range of mountains which border the N'zoia Plateau on the east in British East Africa, mountains called also the Elgeyo escarpment.

So far as is known the little tribe has held its own in this home for ages, constantly attacked by Nandi and Karamoja, tribes outnumbering the N'dorobo more than one hundred to one. It has always beaten them off, sometimes with severe loss to the enemy. The deadly poisoned arrow has been this tribe's all-sufficient weapon.

The N'dorobo sometimes sell the poison, but I doubt that the poison sold is as deadly as that which they use on their own weapons. Of the terrible nature of this poison I have myself been a witness. They told me it lost strength with age. The secret of its preparation is most carefully guarded. When fresh, a very slight wound with a wooden headed arrow is sufficient to kill a man almost instantly.

The monkey (*Erythrocebus whitei*) I shot on the N'zoia Plateau. It is a very shy and very active species living on a level country where there are no high trees, often no trees at all. Indeed it avoids high and thick woods, where other monkeys are usually found. This flat country is so infested with lions and leopards that all the activity and cunning of the native is frequently called into play to escape them. I have even known lions of that region to hunt down and devour a cheetah.

I saw the monkeys several times but only once did I succeed in getting a shot. I never saw more than three of them together and I found them harder to stalk than any other animal I followed in Africa."

The N'dorobo, or Wandorobo, of the deadly poisoned arrows, are a people closely allied to the Masai in physical type and many cultural traits, but differ in being a hunting not a pastoral tribe. Dr. Rainsford does not speak of the method of preparing the poison; Lieutenant Weiss of the German army states however that it is derived by boiling the roots and twigs of *Acocanthera abyssinica* into a pitch-like paste and that in this condition it is smeared on the heads of the arrows.

CROW INDIAN CLOWNS

By Robert H. Lowie

DURING the week of their July festivities the Crow Indians still indulge in an old clown performance formerly conducted in the spring. One man takes the initiative and bids his companions meet him in the brush, bringing with them leaves, gunnysack and mud. They plaster their bodies with mud instead of the usual body paint, pre-

pare crude masks, as well as intentionally ugly shirts and leggings. Some manufacture mock-shields. One performer always masquerades as a woman. Clad in their newly made garments, they return to camp, where of course they cannot be recognized. If possible, they capture and ride the worst-looking horses to be found, and the person singing for the performance secures a miserable drum with cracked drumhead. The spectators hem in the clowns, a horseman pushes back the crowd and the dance begins. Each clown acts in his most ludicrous manner; wags in the audience make comical remarks. The clowns announce by means of gestures that they have come from very far away, from the sky for example, and have had to travel hundreds of days in order to get to the Crow. The spectators try to identify them and very likely pelt them with mud. Finally the dance is over, when the clowns run back to the brush, put on their usual garments, and come slinking back into camp.



MUSEUM NOTES

SINCE the last issue of the JOURNAL the following persons have been elected to membership in the Museum:

Life Members, MRS. W. BAYARD CUTTING, MRS. A. D. JUILLIARD, MISS CHARLOTTE S. BAKER and MESSRS. CARL E. AKELEY, BERNARD M. BARUCH, C. WILLIAM BEEBE, LOUIS V. BELL, W. R. CALLENDER, HUGH L. COOPER, MARCUS DALY, N. W. HARRIS, HENRY C. PHIPPS, ROBERT J. F. SCHWARZENBACH, HERMAN SIMON and MASTER H. MARTYN BAKER;

Sustaining Members, MESSRS. HORACE HAVEMEYER and ROBERT MAXWELL;

Annual Members, MRS. E. S. AUCHINCLOSS, MRS. BIRDSEYE BLAKEMAN, MRS. CHARLES A. DAVISON, MRS. WILLIAM P. DRAPER, MRS. SARAH H. EMERSON, MRS. FRANK D. HARMON, MRS. HALSTEAD PELL HODSON, MRS. EDWIN B. HOLDEN, MRS. THOMAS A. HOWELL, MRS. R. P. HUNTINGTON, MRS. MINOR C. KEITH, MRS. JAMES GAMBLE ROGERS, MRS. JAMES R. SHEFFIELD, MISS EMILY VERNON CLARK, MISS ALICE BLEECKER FOX, MISS MARION ERSKINE PLATT, MISS B. G. STILLMAN, MISS ELIZABETH B. STONE, MISS MARIA WILLETS, and MESSRS. JOHN ACHELIS, LOUIS AKIN, WILLIAM C. BEECHER, CLARENCE H. BISSELL, GRAHAM F. BLANDY, B. BLUMENTHAL, A. HUIDEKOPER BOND, E. H. BRIGHT, IRVING SWAN BROWN, J. ALEXANDER BROWN, THOMAS A. BUCKNER, FREDERICK V. CLOWES, FREDERIC A. COLE, ROBERT H. COOK, CLARKSON COWL, EDWIN WILLARD DEMING, CHAS. DICKINSON, WILLIAM C. DUVALL, FREDERICK H. EATON, MILTON S. ERLANGER, WILLIAM L. FEENEY, ELIAS J. FEUERSTEIN, EDWARD B. FINCH, RICHARD H. FRAENCKEL, ALBERT GALLATIN, E. V. GAMBIER, SAMUEL W. GOLDBERG, FREDERICK GOLDSMITH, MORRIS GOLDZIER, RAMON GUITERAS, HENRY L. GWALTER, DANIEL S. HAGE, WILLIAM A. HAMANN, JOHN G. HANNAH, THOMAS HASTINGS, F. C. HAVEMEYER, MAX HELD, WILLIAM H. HELLER, MAX HERMAN, W. W. HERROY, JAMES S. HIGBIE, HOWARD P. HOMANS, C. S. HOMER, FORD HUNTINGTON, WILLIAM JAY IVES, JAMES W. JACKSON, ALFRED W. JENKINS, PATRICK KIERNAN, EDWARD J. KNAPP, JOSEPH P. KNAPP, LOUIS KROWER, W. V. LAWRENCE, CHARLES M. LEA, R. WALTER LEIGH, GEORGE LUEDERS, DAVID L. LUKE, ALBERT G. MILBANK, GEORGE A. MOLLESON, JAMES G. NEWCOMB, EDWARD D. PAGE, ARCHER VANCE PANCOAST, EDGERTON PARSONS, RAYMOND C. PENFIELD, G. LAWRENCE PERKINS, AUGUSTE RUFFIN POTTIER, WILLIAM J. QUINLAN, JR., GEORGE I. ROBERTS, J. E. ROTH, WILLIAM L. ROUSE, OTTO M. SCHWERDTFEGER, DUDLEY D. SICHER, JAMES C. SMILLIE, RALPH SMILLIE, THEODORE E. SMITH, CARL STOECKEL, HAROLD PHELPS STOKES, GEORGE C. STONE, I. F. STONE, GEORGE H. STORM, EMIL L. STROBEL, CHARLES TATNAM, ALVIN UNTERMYER, OTTOMAR H. VAN NORDEN, ARTHUR WILLIAMS, JAMES V. S. WOOLLEY.

THE skins and skeletons of two Prjevalsky wild horses have been presented by the Duke of Bedford to the American Museum, and one of them has just been received and is now being prepared for mounting. The Prjevalsky horse is the only living wild species of the true horse (as distinct from the asses and zebras). Inhabiting the most remote parts of Central Asia, its existence has been doubted until recent years, and of the specimens sent to Europe and this country, several have been merely Mongolian ponies run wild or hybrid stock. The little herd in the Duke of Bedford's park at Woburn Abbey however represents the true strain of the wild species, the last survivor in nature of the numerous wild horses which inhabited the northern world in prehistoric times.

A PUBLIC READING-ROOM has been established on the second floor not far from the elevator, where visitors will find many volumes bearing upon the collections and work of the Museum. These books include a number of the more general or popular works on natural history, dealing with the haunts and habits of many of the animals, and also books of travel or those telling of the habits of the more savage races, their myths, traditions and customs, or describing what is known of the history of the earlier inhabitants of this country.

THE LIBRARY of the Museum, which is one of the most complete of its kind in this country, is also freely open to visitors, who may consult its many volumes and periodicals. The reading-room is by no means intended to take the place of the library, but rather to lead up to it, and its aim is promptly and readily to furnish general information to visitors who may wish to know more about the collections than can be gathered from the labels and the objects themselves.

MR. CARL E. AKELEY and MR. C. WILLIAM BEEBE were elected life members of the Museum at the meeting of the Executive Committee on January 17, the former in recognition of his explorations and zoölogical studies in Africa and for his contributions to science, the latter in recognition of his scientific work and his gift to the Museum of a collection of mammals from the East Indies.

At the annual meeting of the American Anthropological Association Dr. Robert H. Lowie was elected associate editor of the *American Anthropologist*, and editor of a new quarterly to be devoted to current anthropological literature.

PROF. C.-E. A. WINSLOW was elected Vice-President of the Society of American Bacteriologists at its meeting in Washington during convention week.

THE Executive Committee, at its meeting of January 17, appointed Mr. Charles W. Mead assistant curator in the department of anthropology, the appointment to take effect January 1, 1912.

Two volumes (XXIX and XXX) of the *Museum Bulletin* were published during the year 1911. Volume XXIX is devoted to a single subject, "A Synonymic Index Catalogue of American Spiders" by Dr. Alexander Petrunkevitch, honorary curator of Arachnida in the American Museum. The work comprises all the species known to inhabit the two American continents and their adjacent islands, from Greenland to Patagonia. It forms a volume of nearly 800 pages, and consists of three parts — (1) Bibliography, (2) List of species with synonyms and reference, (3) Alphabetic index to synonyms. Types are designated for the genera, and the localities are given from which the species have been recorded. It is thus an indispensable reference book for all arachnologists.

Volume XXX contains about 400 pages, 17 plates, and about 150 text figures, and gives some of the results of the work of the scientific staff for the year. Among the sixteen papers, one of much general interest by Colonel Theodore Roosevelt, on "Revealing and Concealing Coloration in Birds and Mammals," has been noticed in an earlier number of the *JOURNAL* (Vol. XI, Oct., 1911, p. 200).

IN 1908 the department of anthropology sent an expedition to James Bay, Canada, in charge of Mr. Alanson Skinner, to study the Eastern Cree Indians. The party went in by the Missinaibi River. The next year the party made a second journey, this time down the Albany River. The total distance traveled by canoe and on foot was some twenty-four hundred miles. The scientific results of these journeys have just appeared.¹ While hardships made a complete investigation impossible, this paper gives nevertheless descriptive data on almost every phase of the Cree and Saulteaux culture. The information on food habits and hunting customs is satisfactory and the collection of Cree tales and myths indicates clearly their tribal relationships. The author believes that the Cree have a culture intermediate between that of the Eskimo on the north and the Woodland Indians on the south, best designated perhaps by the term sub-arctic. Particularly interesting are the notes on the use of grooved stone axes, stone knives, and other primitive tools till recently in occasional use. It is often necessary to remind the general reader that the Stone Age was but a condition and not an absolute period. Another interesting point is full data upon typical bear-hunting ceremonies among the Saulteaux, a feature so far not adequately described. Also a unique and almost extinct type of basket weave was found.

¹ NOTES ON THE EASTERN CREE AND NORTHERN SAULTEAUX. By Alanson Skinner. pp. 178, plates 2, figs. 57, *Anthropological Papers*, A. M. N. H., Part I, Vol. IX.

A NEW rattlesnake group to illustrate social instinct in hibernation was put on exhibition during January. Seven banded or timber rattlers (*Crotalus horridus*) in both the black and yellow phases of coloration are represented on a rocky ledge, the poses depicting slow movement on a cool day and in the absence of enemies. Late in the fall under the influence of increasing cold, snakes which have assembled thus in September crawl away through deep crevices into concealed chambers underneath the rocks, where they sleep together throughout the winter. The group shows also color variation in two of the small broods of young banded rattlers. This species is the only poisonous snake besides the copperhead in the eastern United States.

THE department of anthropology was recently visited by Dr. Werner von Hoerschelmann on his return from Mexico, where he has been at work for over a year under the direction of Professor Seler, as holder of a scholarship granted by the Prussian government. Dr. von Hoerschelmann is especially interested in the subject of art and discovered many points of interest in the Museum's collection of Mexican antiquities.

THE Indian tipi in the new Plains Indian Hall has been mounted by Mr. Schoichi Ichikawa. The floor has been carefully laid with buffalo grass sod supplied by Dr. James R. Walker, Pine Ridge, South Dakota, so that the visitor may see, as it were, the home of the roving Indian pitched for the night upon the brown unbroken turf of the Plains as in the good old buffalo days. The tipi came from the Blackfoot tribe. Within may be seen the life cast of a Blackfoot man in the act of preparing tobacco for the pipe. Near him his younger wife is stirring up the fire, while opposite her is the older wife with an infant. The latter has her face liberally coated with earth paint as was the custom among those of her station in life. Back of the fire is an incense altar upon which daily prayer offerings are burnt and from which may be seen rising a faint column of smoke.

THE MUSEUM has received a number of bottlenose porpoises (*Tursiops tursio*) as a gift from the New York Zoölogical Society. For many years a fishery has been in operation at Cape Hatteras, where porpoises are taken for the sake of their oil and also for their hides, though how the tender porpoise skin can be tanned into tough leather is one of the mysteries of modern science. Dr. Charles H. Townsend of the aquarium has for some time wished to secure specimens from this locality, a project requiring a combination of favorable circumstances. The porpoises must be feeding near shore, which they do at certain seasons and not at others, else being caught in nets they would be drowned before brought to land; the sea must not be heavy or the same unfortunate result ensues, to say nothing of the danger of taking boats through the surf; also the weather must be neither

too hot nor too cold, because of danger of the animals dying in transit. Dr. Townsend devised an ingenious method by which the porpoises would travel comfortably and be left free to breathe, and dispatched an assistant to Cape Hatteras. After considerable work and delay half a dozen fair-sized examples were selected, packed, and started on their way to New York, only to be killed by the sudden settling down over the east of record-breaking cold.

MR. EDWARD PAUL, chief of the Penobscot Indians, Old Town, Me., called at the Museum in January to see the Eastern Woodland collections and especially those of his own people. Mr. Paul is an educated man. He says that notwithstanding the fact that his people outwardly conform to our mode of life, they at home preserve many aboriginal traits and customs. He thinks that this is chiefly due to the fact that his tribe still owns the island home of its ancestors, whose shores are seldom visited by white people. The Indian men work for the whites but each evening come back to the island, where they are isolated completely. Mr. Paul volunteered to assist in arranging the Penobscot section of the new Eastern Woodland Indian hall.

DR. EDWARD A. SAPIR, director of the anthropological survey of Canada, and H. Barbeau, a member of his staff, recently spent a few days at the Museum studying the anthropological collections.

DURING the fall months, Messrs. Allen and Miller, who with two native assistants now form the Colombian expedition, worked in the Central Andes, along the Quindio trail and on the paramo of Santa Isabel. In a letter dated Cartago, November 16, Mr. Miller states that sixteen hundred specimens of birds and mammals had already been secured, and that the expedition was then about to penetrate the little-known coast range to the westward. Here only foot-trails exist and all supplies will therefore have to be transported on the backs of men.

FIELD work in Florida carried on during November by Messrs. F. E. Lutz and C. W. Leng in company with Mr. W. T. Davis, was primarily for the purpose of obtaining information which would facilitate future work in what is an easily accessible subtropical region almost unexplored biologically. The party covered about fifteen hundred miles, incidentally collecting more than five thousand specimens which will give new records as to either date or locality or both for one thousand species. The fauna of Florida is of especial interest to the department of invertebrate zoölogy in its bearing upon problems of distribution, for Florida is the last step in the journey of such species as may have come to the United States by way of the West Indies.

It is expected that before the end of the month the northeast room on the first floor will be converted into a shipping and receiving office. The establishment of this room will relieve the building's present main entrance from the congestion of delivery trucks which has previously existed.

THE department of invertebrate zoölogy has secured a series of six wax models constructed by Mr. Ignaz Matusch to illustrate some of the results of his researches upon the life histories of tree-hoppers. This series will make a valuable addition to the synoptic exhibits in the Darwin hall.

ETHNOLOGICAL exchange specimens received from the Australian Museum of Sydney, New South Wales, illustrate the culture of the natives of Australia in a collection of boomerangs, women's fighting poles, shields, spears, grave-markers, baskets, water-bags and fire-sticks.

LECTURE ANNOUNCEMENTS

MEMBER'S COURSE

Thursday evenings at 8:15 o'clock. Doors open at 7:45.

- February 21 — MR. CARL E. AKELEY, "Elephant Hunting in Equatorial Africa."
 February 29 — MR. PAUL J. RAINEY, "Hunting Lions with Hounds in Africa."
 March 7 — MR. GEORGE BORUP, "With Peary in the Arctic."
 March 14 — MR. CLINTON G. ABBOTT, "Half Holidays with the Birds."

PEOPLE'S COURSE

Given in coöperation with the City Department of Education

Tuesday evenings at 8:15 o'clock. Doors open at 7:30.

- February 6 — PROF. A. V. WILLIAMS JACKSON, "Through Persia and Central Asia."
 February 13 — MR. SIDNEY DICKINSON, "Picturesque New Zealand."
 February 20 — Subject and lecturer to be announced.
 February 27 — PROF. HENRY E. CRAMPTON, "Tahiti and the Society Islands."

Saturday evenings at 8:15 o'clock. Doors open at 7:30.

The last four of a course of lectures on "The Doctrine of Evolution and the problems of Human History" by PROF. HENRY E. CRAMPTON. Illustrated by stereopticon views and by exhibits.

- February 3 — "Man's Place in Nature and its Attainment."
 February 10 — "The Races of Man and their Evolution."
 February 17 — "The Human Mind and its Origin."
 February 24 — "Insect Societies and Human Societies."

LEGAL HOLIDAY COURSE

Fully illustrated. Open free to the public. Tickets not required.
 Lectures begin at 3:15 o'clock. Doors open at 2:45.

- February 22 — PROFESSOR HENRY E. CRAMPTON, "In the Wilds of British Guiana and Brazil."